



Streamlining CHP in Nevada

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U.S. Environmental Protection Agency

CHP Opportunities for Las Vegas Casinos
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Overview

- Purpose
- The Panel
- Your CHP Development Process Handbook
- EPA CHP Partnership Procurement Guide
 - Selecting a Contractor / Project Developer
 - CHP Financing
 - CHP Siting and Permitting Requirements
- A Summary: Streamlining CHP

Purpose

- Share insights on how to get a project installed (EPA's CHP Procurement Guide):
 - Contractors
 - Financing
 - Siting and Permitting
- Key organizations / Interfaces required
 - Electric Utility
 - Gas Utility
 - Department of Air Quality

The Panel

- Brian O'Donnell, Supervisor/Key Account Management, Southwest Gas
- Larry Holmes, Manager Customer Strategy and Programs, Nevada Power
- Richard Beckstead, Permitting Manager, Clark County DAQEM
- Pamela Vilcan, Leadership in Energy and Environmental Design (LEED), Las Vegas Chapter

CHP Development Process Handbook

- Focused on getting projects in the ground
- Suite of Materials Organized by Project Stages
 - Stage 1: Qualification
 - Stage 2: Level 1 Feasibility Analysis
 - Stage 3: Level 2 Feasibility Analysis
 - Stage 4: Procurement
 - Stage 5: Operations and Maintenance
- Tools and Resources provided per Project Stage

Selecting a Project Developer

- Ways to structure development of a project:
 - Develop internally:
 - Site hires a consultant, plans and manages the design-construction effort and maintains ownership control of the project
 - Purchase a turnkey project:
 - Owner selects a qualified project development company to design, develop, and build the project on a “turnkey” basis
 - Team with a partner:
 - Teams with an equipment vendor, EPC firm, or investor to develop the project and share the risks and returns

Selecting a Project Developer

- The Role of the Project Developer:
 - Carry out project scoping
 - Conduct feasibility analysis
 - Select CHP configurations
 - Create a financial pro forma
 - Obtain environmental and site permits
 - Secure financing
 - Contract with engineer, construction and equipment supply firms
 - Provide overall project management

Selecting a Project Developer

- **Selecting Contractors, Consultants, and Developers**
 - Previous CHP project experience
 - A successful project track record
 - In-house resources including experience with financing and environmental permitting and siting issues.
- **Selecting other Types of Project Partners: Pure Developers, Equipment Vendors, or EPC firm**
 - Can bring specific project needs such as equipment or the ability to finance the project
 - Willing to take on risks of the project

CHP Financing

- What Investors are Looking For:
 - Debt Coverage Ratio – hosts ability to meet debt
 - Owner's Rate of Return – Required range from 12-20%; Outside investor 15-25%
 - CHP Project Risks and Mitigation Measures:
 - Fixed price contracts
 - Proven technologies with performance guarantees / warranties
 - Permits initiated
 - Interconnection requirements confirmed
 - Financial performance

CHP Financing

- Project Financing Options
 - Company Earnings or Internal Cash Flow
 - Debt Financing
 - Equity Financing
 - Lease Financing
 - Project or Third-Party Financing
 - Build-Own-Operated Options
 - Financing Options for Public Entities (bonds, FEMP)

CHP Siting and Permitting Requirements

- Obtaining required utility interconnection, environmental compliance, and construction permits:
 - May effect project design
 - Neither construction nor operation may begin until in process or in place
 - May take 3-12 months to complete
 - Depend on location, technology, and site characteristics

CHP Siting and Permitting Requirements

- Required Approvals:
 - Local utility approvals:
 - Electric utility interconnection study and approval
 - Natural gas connection / supply
 - Local jurisdiction pre-construction and construction approvals
 - Planning department land use and environmental assessment / review
 - Building department review and approval of project design and engineering
 - Air quality agency approval for construction
 - Local jurisdiction post-construction and operating approvals
 - Planning and building department confirmation and inspection
 - Air quality agency confirmation
 - Operating permit

CHP Siting and Permitting Requirements

- **Permitting Insights**
 - Hold preliminary meetings with key regulatory agencies
 - Develop permitting and design plans early
 - Submit timely permit applications to regulators
 - Negotiate design changes with regulators to meet requirements
- **Utility Interconnection Requirements**
 - Application
 - Interconnection Study
 - Interconnection Agreement
 - Power Purchase Agreements

To Summarize: Streamlining CHP

Need:

- Good information you can trust
- Ways to communicate information up the chain
- A project developer/team you can trust
- Minimize time, cost and risk
- Maximize return on investment

The EPA CHP Partnership

- Our Partners build projects successfully all over the country
- EPA's CHP Partnership Team (www.epa.gov/chp)
 - Can work with you, providing direct technical assistance by:
 - Helping determine if CHP is a fit for your facility
 - CHP Qualifier
 - Needs Assessment
 - Identifying and preparing for barriers or opportunities
 - Assessing the policy environment
 - Analysis of regional and local market trends
 - Identification/ networking of additional CHP resources
 - Quantifying the opportunity and promoting the benefits of your proposed operational CHP project.
 - Level 1 Feasibility Analysis
 - CHP Emissions Calculator
 - ENERGY STAR CHP Award
 - CHP Partner Annual Greenhouse Gas Reduction Report